IN THE CLAIMS

1-9 (Cancelled)

11. (Original) A method for eliminating packet fragmentation comprising the steps of:

a. providing an optical line terminal (OLT) connected to a plurality of optical network units (ONUs), each of said ONUs transmitting packets arranged in sub-queues having a total byte length, said packets transmitted in response to a grant received from said OLT, said grant having a grant length; and

b. matching said total byte length with said grant length, wherein said step of matching includes, by each said ONU, hiding from said OLT an update in a queue status, whereby the fragmentation loss is eliminated.

12. (Original) The method of claim 11, wherein said hiding includes freezing a transmission order of queues.

13. (Original) The method of claim 11, wherein said step of matching further includes checking, from highest to lowest priority each of said sub-queues, identifying in each said sub-queue ungranted packets with respective ungranted packet lengths, and marking each said ungranted packet as about to be transmitted.

14. (Original) The method of claim 13, wherein said marking includes comparing to zero a stage variable selected from the group of reported bytes below threshold, reported total bytes, and total bytes, and marking an ungranted packet as granted if said stage variable is greater than zero.